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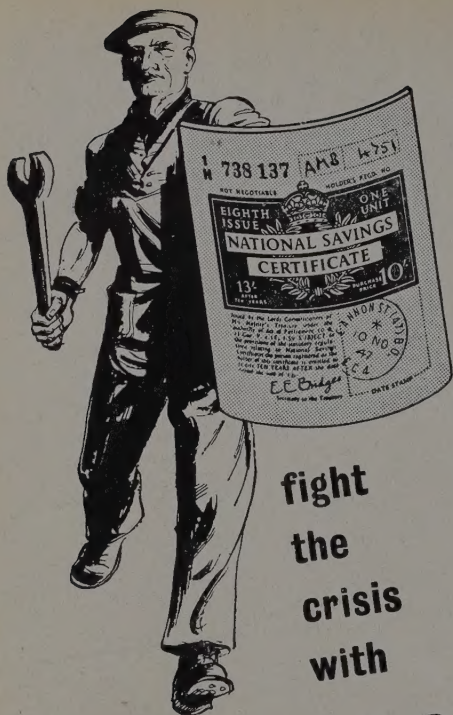
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Breeding the Beaver

by FRANK SMYTHE

IN one respect at least the beaver is the most remarkable of all animals since, apart from man, it is the only mammal that, by making large-scale changes, adapts its environment to its needs. Many striking examples of this are afforded by its activities in North America, where, owing to the damming of rivers, whole towns have had their power and water systems cut off or interrupted, and the character of many trout and salmon fisheries has been completely altered. In the main, however, the beaver is far more useful than destructive; and as a water conservator and soil irrigator his importance in the scheme of things is now coming to be realized.

During the last century, the beaver was ruthlessly trapped for his warm pelt, especially in western Alberta and along the eastern foothills of the Canadian Rockies. The result of this depopulation was to eliminate the annual building of thousands of beaver-dams that conserved the waters flowing from the mountains into the prairie; with the consequent drying up of areas otherwise fit for cultivation.

It is in order to restore and add to this acreage lost to cultivation that the Government of Alberta have turned their attention to the possibility of reinstalling the beaver and increasing its numbers. For it is realized that a far greater area can be irrigated and fertilized by beavers than is possible by a man-made irrigation system, when account is held of expense and labour. Steps are therefore being taken to breed the animals in specially controlled farms.

Now there are two possible methods of breeding beavers. One is to instal them in a suitable area of stream, lake and forest, and allow them to breed naturally; but this is a slow and uncertain method which has some grave disadvantages. The beaver, being a nocturnal animal, is very hard to control and trap. Also, it is preyed upon by such beasts as cougars (mountain lions), wolves, coyotes, lynx, wolverines and bobcats. Worse still, the beaver is a born wanderer, and as soon as he has consumed the available food in one area he moves on to another, perhaps many miles away. He is also very uneconomical in his feeding, and fells a far greater number of trees than he needs. It is considered, therefore, that much better results can be achieved from breeding him under artificially controlled conditions.

Only one controlled beaver farm is known to have existed in the past. This was at Hill City, Minnesota, U.S.A. From all accounts it was very successful, and only ended when the owner ran out of aspen poplars, the staple diet of the beaver. The second farm (the first in Canada) was constructed in 1946 near Entrance in Alberta, some eighteen miles from the Canadian National Railway, which links Edmonton with Jasper. It is under the management of Colonel Alan Innes-Taylor, who in 1946 invited my wife and me to visit it and make a study of the beaver. As it is essential when breeding any wild animal in captivity to have a thorough understanding of its natural mode of life and the conditions under which it flourishes, some account of these will precede a description of its farming.

Owing to its nocturnal habits, and the fact that it breeds out of sight of man, a great deal has still to be discovered about the beaver. Farming it under controlled conditions provides the possibilities for this study, and it is to be hoped that some interesting zoological information will accrue during the next few years.

Topographically, the beaver extends from northern Canada as far south as California. It has one litter of young a year, but in the north conditions are such that it seldom produces more than a single offspring at a time. In the south, where conditions are more genial, it may have two or three. There are, however, a large number of still-births. The beaver mates in the winter, the gestation period lasting from three to five months. How long it lives is still a moot point—it is thought up to twenty-five or thirty years.

There are various types of beaver, large and small, those from California being golden in colour and somewhat bigger than the brown-furred Canadian animal. One condition is necessary for them all: they cannot live permanently in water at a temperature that greatly exceeds 40° F. That is why they are to be found in streams and lakes either fed by melted snows or at a height great enough to keep the water cool.

A beaver is about two feet in length, and has warm, thick fur. It swims by means of its webbed hind-feet with its large, flat, membranous tail usually motionless behind it. This tail may, however, be employed



All photographs, except one, by the author

(Above) Beaver country amidst the lakes and forests of the Canadian Rockies near Jasper, Alberta. Aspen poplars, the staple food of beavers, are plentiful by the waterside. (Opposite) For a week this beaver was watched swimming all alone in a lake far from any poplars—an unusual phenomenon

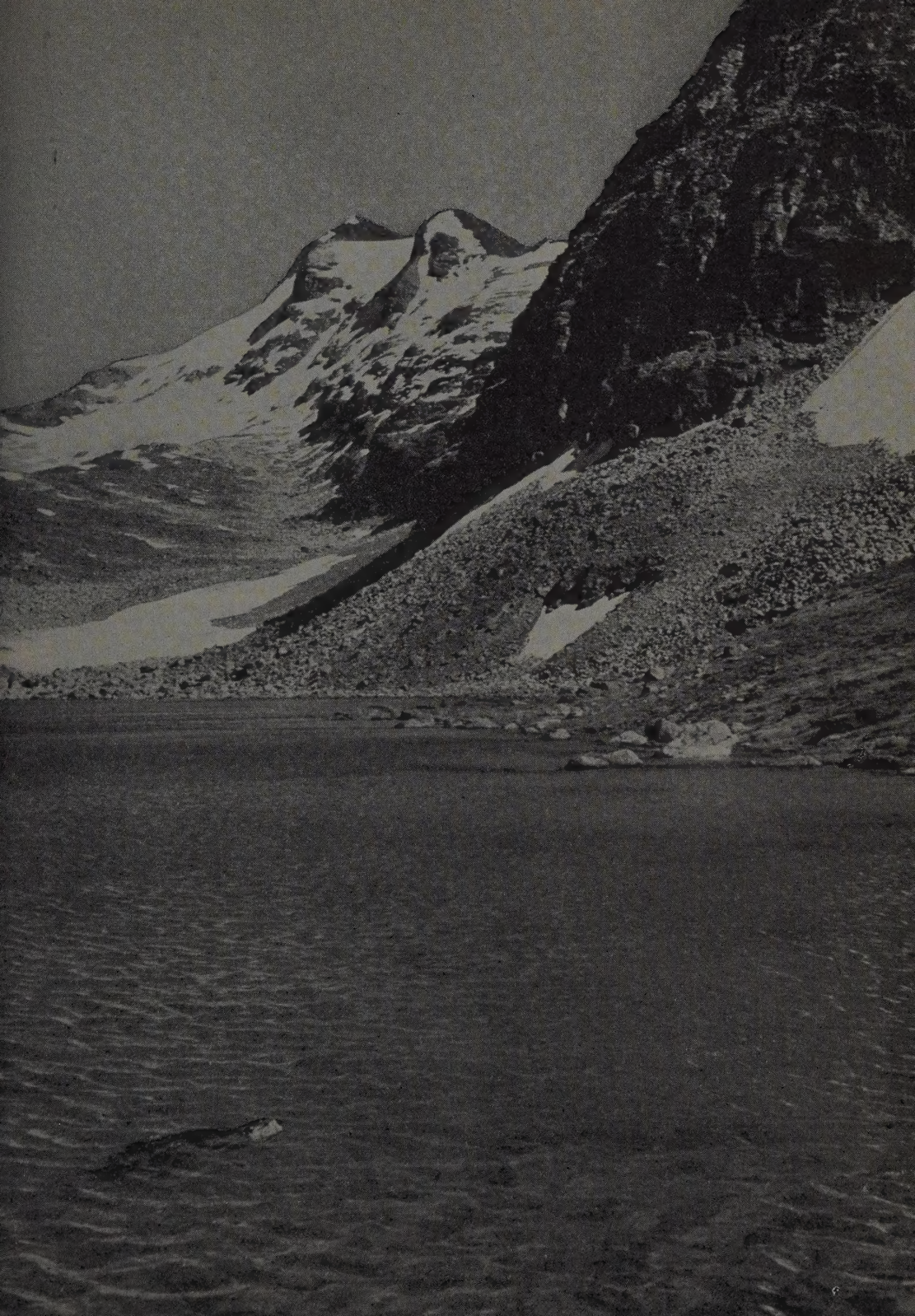
with a to-and-fro sculling motion, or as a rudder in effecting any sudden change of direction. It is also useful in driving the beaver beneath the surface of the water. So powerful is it that the beaver is enabled to force large and buoyant logs of wood down to the bed of a lake or river.

As already stated, the beaver is a wanderer by nature and its ways are sometimes inexplicable. I once saw a solitary beaver swimming about in a lake each day for a week—an unusual circumstance. It was the sole occupant of the lake, which was many miles from aspen poplars, its normal food; in this vicinity the trees were all balsam firs, from which it will feed only as a last resort. It possessed no mate and had constructed no lodge or dam. Possibly, this was an old animal that had been driven out of its colony to wander and die.

In order to appreciate the proceedings of a pair of beavers, let us suppose that they are

wandering through the bush in search of a suitable home. The conditions they search for include a lake of any size or a stream up to 100 yards in width. Theirs is not a pleasant journey across country through the bush, with no water to escape into in the event of attack, and they feel slow, clumsy and vulnerable out of their native element. However, they move reasonably quickly, despite taking advantage of every fragment of cover and pausing frequently to crouch under bushes. How do they know where to go? Where will they find water? Will this toilsome trek bring them to a new haven?

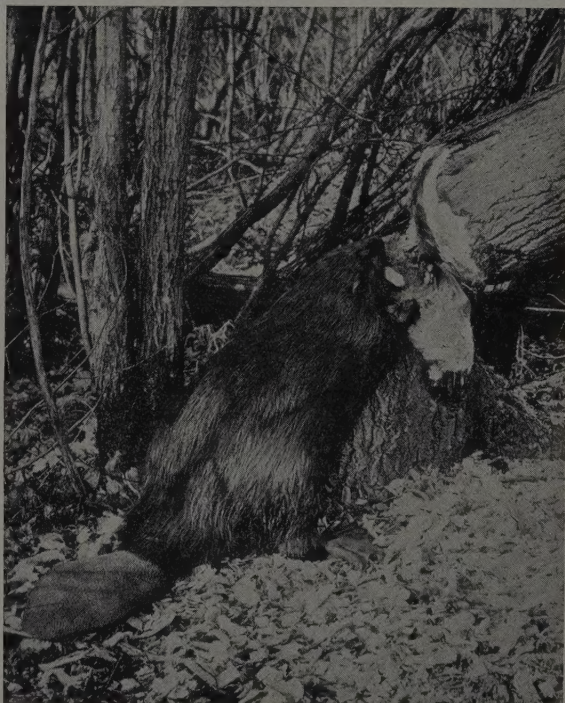
Along they scurry, nosing their way through the densely massed alder, insinuating their bodies between the prickly devil's club, scuttling over a tangle of fallen trees. Then, suddenly, from ahead between the tall spruce and larch comes the comforting sound of running water. They emerge cautiously onto the banks of a river, flowing unchecked through





(Above) Aspen poplars felled in a single night by beavers living in a near-by lake. On the following night they returned to gnaw each trunk into a number of logs, which they were then able to transport to the water for building or repairing their dam and lodge; the bark, when kept damp, remains edible for several months

(Right) A beaver surveys his conquest. Working with amazing rapidity (trees up to four inches in diameter are felled in ten minutes), it gnaws round the circumference of aspen poplars as large as a foot in diameter until they crash down; the direction of their fall, contrary to general belief, is not controlled



By courtesy of the Director of European Emigration for Canada

the walls of forest. In places it is narrow, and the water rushes with such depth, force and tumult that even beavers could raise no dam against it, but in others it is wider and shallower, and there are bays and subsidiary streams formed by low boggy islands. Best of all, among the spruce and larch hard by the river are groves and clumps of aspen poplar shimmering in the sunlight. It is all the beavers desire, this temporary kingdom of river, swamp and forest.

They select the site of their new home with the greatest care in a bend of one of the subsidiary streams, where the wash of the flowing water is least rapid, and the construction of a lodge and dam will entail the minimum of labour. Here, also, a dam built at the lowest extremity of the island, and joined with the main bank, will ensure the formation of a lake, even should the main stream fall to a trickle during the summer months.

The first consideration is shelter and protection. Bushes along the bank, and the long coarse grass, will serve while lodge and dam are under construction; and several little tunnels and 'forms', similar to those made by hares, afford excellent temporary hideouts unsuspected by other animals.

Now begins serious constructional work. After darkness has fallen they set to work on the aspen poplars. Squatting upright with their forefeet against the base of a tree, they move their upper teeth and jaws rapidly across the bark with a continuous half-rasping, half-tearing sound very similar to that of a saw. First of all they chew and eat the bark and a fraction of an inch of the wood beneath. To a human being the bark of the aspen poplar is bitterer than quinine, but there is enough sustenance in it to maintain the beaver, for it contains various nutritious substances, including vitamin B and carbohydrates. Perhaps one day man will live off extracts from wood. The Germans fed some of their troops from sawdust extracts during the war.

The cut made in the tree is wide enough to enable the beaver to get his head into it and he usually rings the circumference of the tree until it falls. He works with astonishing rapidity. Trees up to four inches in diameter are brought down in ten minutes, and trees up to one foot in diameter are felled. The favourite-sized tree is about six inches in diameter. It has been said that the beaver is sufficiently intelligent to drop trees towards the water, but my observations and the accompanying photograph prove that this is not true. He cannot govern the direction and trees fall in all directions.

The beaver fells trees for three reasons: to construct his dams and his lodge, and for food. As already stated, he is very uneconomical, and uses, either as food or for constructional purposes, but a fraction of what he fells, unless it happens that trees are scarce. He is, indeed, a bit of a glutton, and before finishing one dish passes on to the next. There is, however, one excuse for him. He likes fresh bark to eat and it becomes distasteful to him within a few days after the tree is felled. But if the tree, or parts of it, can be moved to the water and stored there the bark will remain fresh and palatable for months. Hence the pains taken by the beaver to make a pond and store it with timber.

As it is impossible for him to shift a heavy tree to the water, he cuts it up into transportable sections. When doing this he will usually choose timber which is growing on a slope above the water, and down this slope make a runway, along which he will drag logs and branches one after the other. He will also fell and cut up trees some distance from his lodge, along the shore of the pond, and tow them through the water to the lodge.

The lodge is a complicated structure, rounded in contour and about sixteen feet in length and twelve feet in width. It is built in the pond, usually within a few yards of the bank, and consists of sticks cemented with mud. The ends of the sticks are cut off inside to form passages and a living room. The passages are below water level and form an excellent hide-out, but one passage, its entrance below water level, rises to a second floor containing a living-room above water. This living-room is quite dry, and the beaver makes a warm nest in it with chips from aspen poplars.

The dam requires all his efforts. It may have to be made against swiftly running water several feet deep, and its construction is a miracle of nature. It is often five or six feet high on the lower face, and holds back thousands of tons of water to form a lake extending for hundreds of yards.

I have already said that a beaver, by means of his powerful tail and webbed feet, can drag a log beneath the water and hold it there; but how at the same time he attaches the sticks and logs of which the dam is composed to the river bottom against the swift current of water, is a mystery not yet solved. He uses mud as a cement, carrying it between his paws and his nose, and it is thought that in some way he treats it to thicken and strengthen it. Since he can evidently not perform all these difficult jobs at the same time, it may be supposed that he begins with the lightest material,

driving into the mud the willow sticks which he often employs in the early stages of construction, and subsequently builds up on that.

Not only one dam may be built but several, for the beaver is a sound and conscientious engineer, and if he thinks the water will be better conserved thereby he will build a series of them. It is noteworthy that a dam is not always constructed directly across a stream, for two dams may be built in echelon from either bank so as to deflect the water from one side to the other in suitable pools.

Stones are also used in the construction of a dam, and account partly for its stability. So the beaver goes on day by day and week by week, and slowly the dam rises to water level. Yet neither dam nor lodge is ever finished, as repairs and renovations have constantly to be made and in this, too, the beaver is tireless.

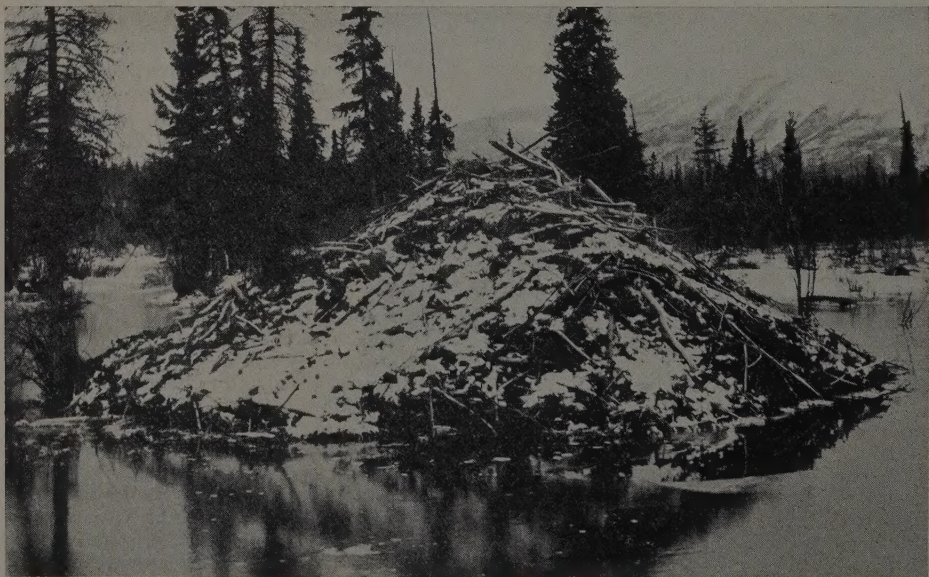
Then comes the 'interesting event' and in due course Mr and Mrs Beaver emerge proudly with their family. To see them you must watch a beaver pond at about four in the afternoon when they are playing in the water, the young frisking like puppies and grappling with one another, while their parents go ashore for food. But beavers do not like being long on shore as they do not feel safe there, and they prefer to feed in the water or the lodge. You will see, first of all,

Mr Beaver emerge from the lodge and cruise warily around before embarking on the unknown terrors of a shore landing in hostile country.

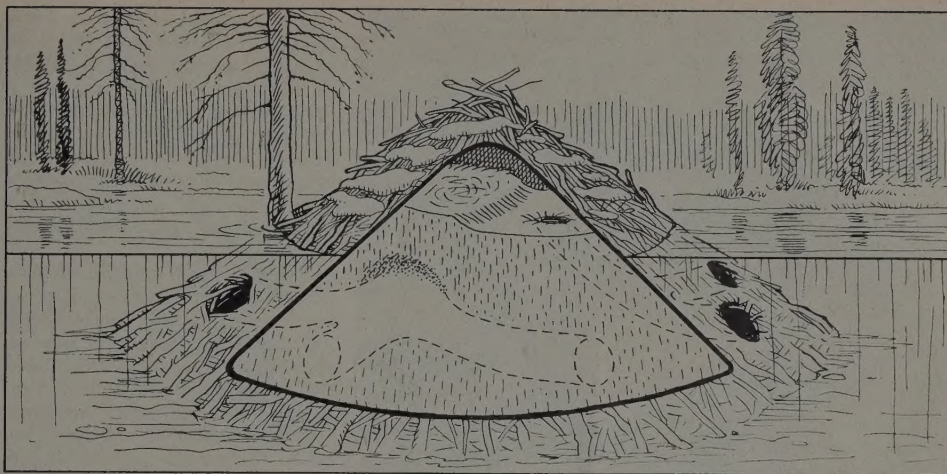
As they swim and play, beavers often make the strangest sounds. Their callings and conversations sometimes resemble the whimperings of a puppy. There is also a warning hiss and a complaining squawk, and often a far-away horn-like note. It has been proved that their ears are attuned to higher-pitched notes than ours. Thus, the click of a camera shutter will not affect them, but the tearing off of a film pack will alarm them considerably.

At the end of the second year the lodge usually contains two adult beavers, three sub-adults, and from two to four young. The population remains stable at about this number. As the young grow up, and the trees are felled and eaten, the ponds are extended by further dams, and in some cases auxiliary ponds and canals are formed so that timber can be towed from greater distances. For beavers will not transport timber which grows at a distance greater than about 125 yards from the water, and lodges are often abandoned when the range of fresh timber exceeds 75 yards.

Steadily the aspen poplars are felled and out of the felling the beaver will account in

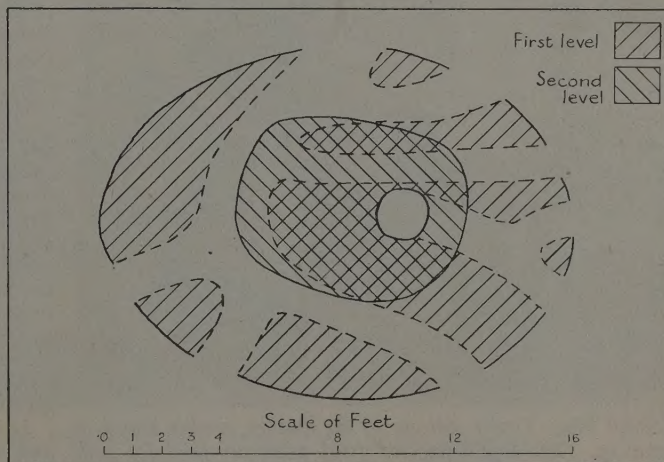


A large and well-built lodge constructed by beavers of sticks cemented together with mud. There are a number of underwater passages through it, only one of which leads to the interior living and breeding room—a warm, dry nest lined with aspen poplar chips, and lying above water level



Diagrams by Alison Birch

The beaver enters his living-room through a hole in the floor. He comes home damp, but Mrs Beaver and the children remain dry in their nest on a raised platform. Access is through one of the underwater passages; the section shows how a network of others traverses the lodge. There is much still to be learnt about the beaver's reasons for making this elaborate system of thoroughfares



stripped bark for about one cord a year. Although aspen poplar is his favourite diet he will also eat birch, his next preferred food, aquatic plants (especially water lilies), dogwood, willow, wild cherry, raspberry leaves, alder, osier, cottonwood, cow parsnip, wild roses (of which he is very fond), grass, bedstraw and Solomon's seal. There are cases also where beavers, which have been tamed to make pets, have been fed on corn, apples and whole-wheat bread. In areas where they are hard put to it to find food they will eat the bark of conifers, especially the Douglas fir. They do not appear to eat, but may cut, lodgepole pine and Engelmann spruce.

At length the time comes when the food is all gone and the grown-up family must move on. Whether they mingle with the beavers of

other lodges, or whether they split up into pairs and go their separate ways, is not certain; probably in most cases the latter. There is much still to be learnt about the colonizing and social life of beavers.

If they decide to look for another home downstream they may destroy their old dams before setting off, the probable reason being that they do not want their new site to be polluted by the stagnant water from the old pools; or it may be that they simply dislike to leave stagnant water behind them. The beaver is an exceptionally clean and sanitary animal.

So once again the beaver is off on his travels. It is plain for all to see where he has made his home, from the hundreds of stumps of which some have been cut several feet above the ground during the heavy snows of winter.



Colonel Innes-Taylor and one of his beavers, readily tamed in captivity. The supple-fingered front paws are used for both carrying and building, the webbed hind-feet for propulsion

And now he must repeat his herculean tasks all over again. There is something in his pertinacity and faith that has its lesson for man.

It was on a late September day that I first visited Colonel Innes-Taylor's ranch (the Eager Beaver Ranch he has named it), and we motored from Entrance along a rough jeep track through forests of spruce and aspen poplar, which cover the foothills eastwards of the Rockies for hundreds of miles. Now in the fall the poplars stretched their sheets of gold among the vast forests, which extended as far as the eye could see except to the west where the great wall of the Rocky Mountains rose like some white foam-crested reef over the forest-clad rim of the world.

The beaver farm, which was in course of erection, was at a height of about 3500 feet

above sea level close to a series of lakes. No less than 500 acres of aspen poplar were available as food for the beavers, and it had already been estimated that the rate of consumption of the beavers would be less than the rate of new growth in the poplars. The basis of the farm thus appeared to be economically sound.

Already a windmill electric plant and numerous outbuildings and workshops had been erected. Among these was the first of the beaver houses, a long, low, wide-spanned building well ventilated, but without windows, and electrically lit. A path ran down the centre and the spaces on either side were divided into pens. Through these pens flowed streams of icy water, diverted from a neighbouring river. Each pen was sub-divided into two compartments. In the outer the beaver could either disport himself in the stream, which was several feet deep, or climb out of the water onto a concrete floor. Beneath the stream was a hole which led into an inner compartment. Diving through the hole, the beaver entered this compartment, and climbed some steps out of the water onto a dry shelf. Here he made his nest of poplar chips, in which the female would give birth to her young.

It was a simple arrangement and depended for its success on the beavers becoming acclimated to their unaccustomed and limited surroundings, and a never-failing supply of cold fresh water and aspen poplar. Already they seemed to have grown tame and were not shy of the visitors who watched them in their pens. As it is unnecessary for them to make dams and lodges and they have no materials with which to do so, it would be interesting to see whether beavers thus reared in captivity would instinctively revert to such constructional work when turned loose in the wild.

It is too early yet to say whether this method of breeding beavers will prove successful. Beavers can be individually tamed, but in their life and breeding habits they are shy and secretive creatures which naturally prefer the wild and lonely places to any artificial confines set up by man.



Kodachromes by Ernst Schwitters

THE DESCENT FROM CONISTON OLD MAN WITH LOW WATER TARN IN THE FOREGROUND

Colour in the Lake District

Notes by BRUCE LOGAN THOMPSON

People who know England as the soft, green country of the southern counties are sometimes taken aback at the stern severity of the Lake District in the north. They complain that the mountains are grey, the buildings, the stone-wall fences, even the sheep are grey, and the lakes themselves reflect the grey-ness of everything else. It is a mistaken impression. Of course there are days when the countryside is drab and humpsome, but the outstanding memory is of colour.

In spring the most welcome sight is the early emerald of the larch, that much-criticized alien of 150 years' standing. Of strictly native trees the most striking are three flowering ones: the wild cherry, the hedgerow bird cherry and the haw-

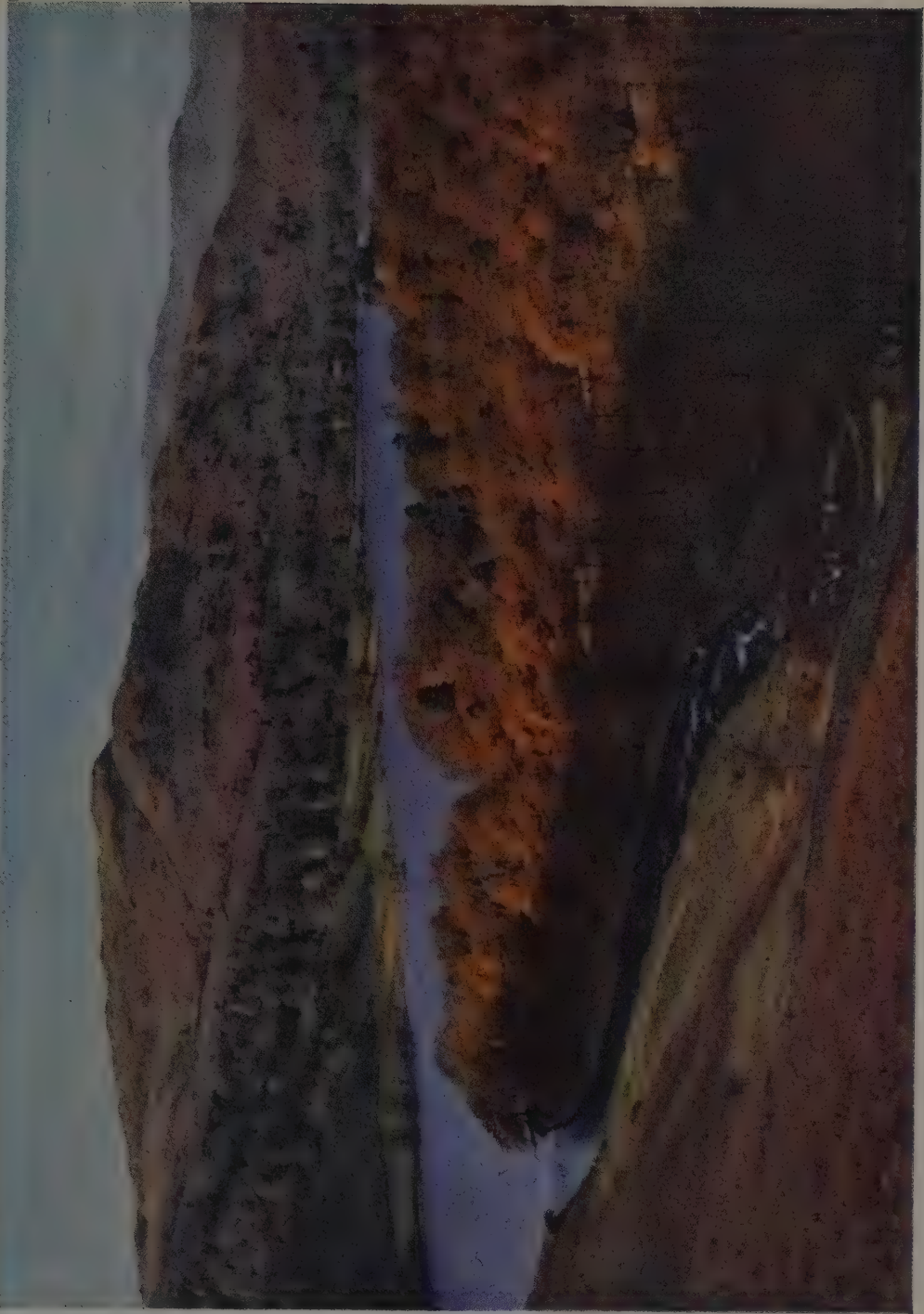
thorns. The Lake District is not remarkable for wild flowers in the mass, except for a few valleys where Lent lilies grow in profusion by the becks and where, later, the woods have a carpeting of hyacinths. In gardens, however, rhododendrons and azaleas flourish and make a brilliant show.

From June to September the countryside has a disappointing sameness about it: the bracken—everywhere too plentiful—is a uniform dull green and so are the woods. The place for colour in these months is by the rivers and becks; pools of incredibly clear water, with green stone beneath, are almost dazzling in the summer sunshine.

By the autumn the scenery becomes its most vivid and startling. The bracken turns russet, so that



FROM KELSICK SCAR AT THE TOP OF SKELGHYLL WOODS ONE LOOKS ACROSS WINDERMERE TO THE CONISTON FELS



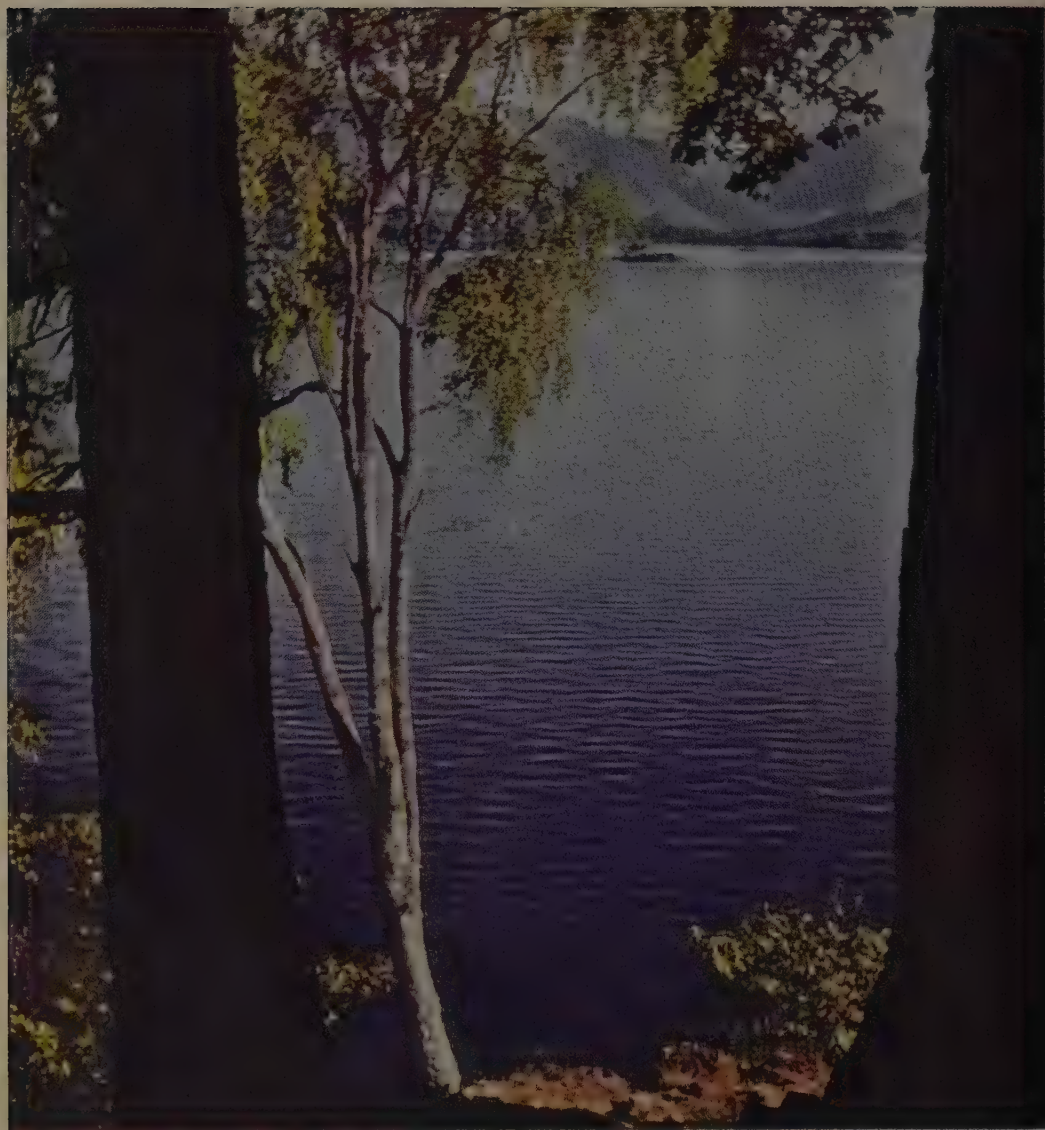
BETWEEN BANERIGGS WOOD AND LOUGHRIGG FELL THE ROTHAY FLOWS OUT OF GRASMERE BACKED BY SILVER HOWE



ST. JOHN'S-IN-THE-VALE WITH WANTHWAITE CRAGS ON THE RIGHT STRETCHES NORTHWARDS FROM THIRLSPOOT



THIS BAY ON THE SHORE OF THIRLMERE PROVES THAT EVEN A RESERVOIR FOR MANCHESTER MAY BE BEAUTIFUL



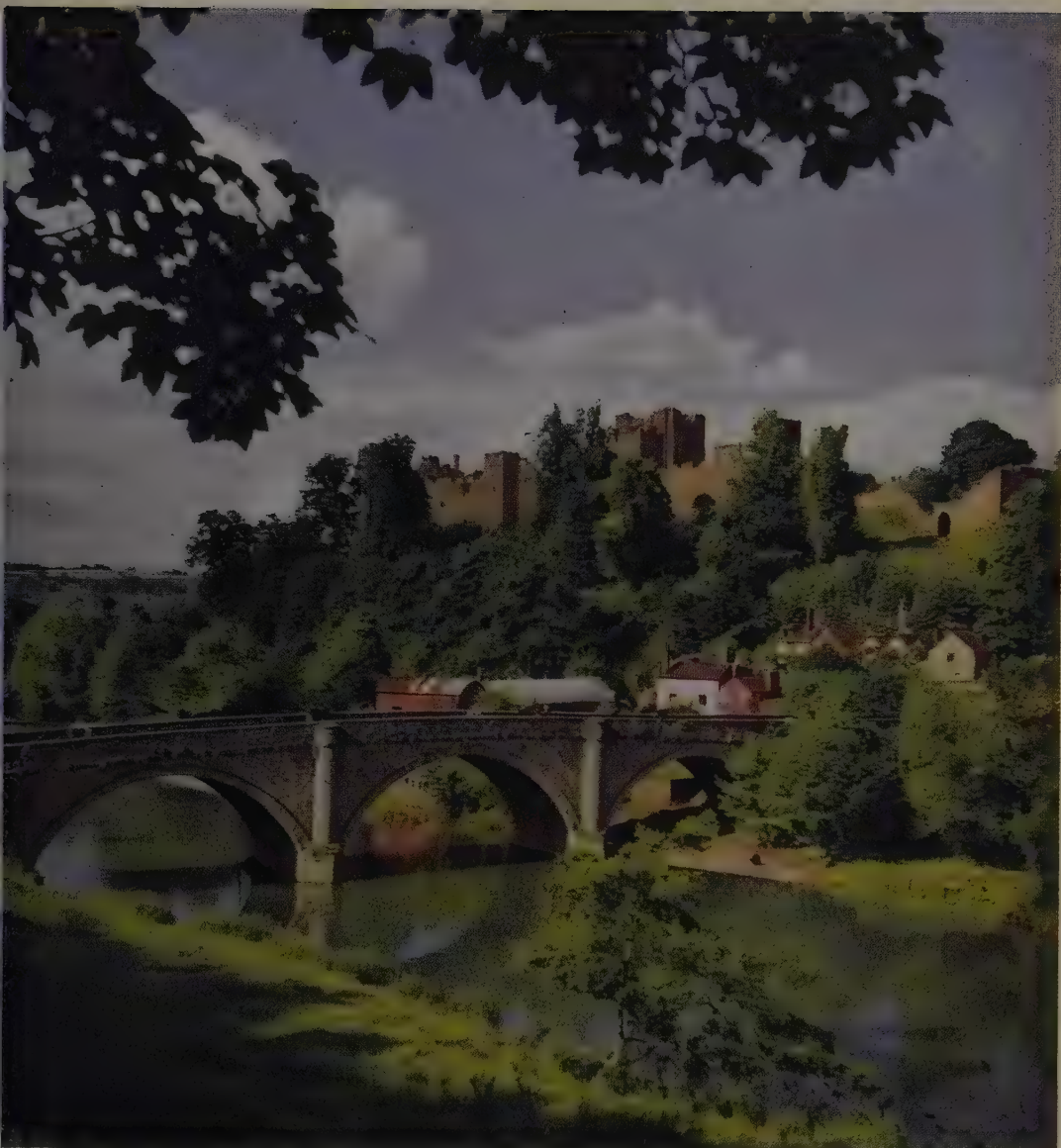
ULLSWATER IN THE LAKE DISTRICT FROM GLENCOYNE PARK LOOKING TOWARDS PATTERNDALE

whole fellsides might be afire; birches, for a brief period, are hung with gold; the ghylls are cheerful with the scarlet berries of the rowan; the waterfalls seem to get whiter and the lakes and tarns more blue.

The colourful days are accentuated, though less frequent, in winter. By now the tops of the fells are capped with snow, there are purple shadows in the crags, the oak coppice woods are bronzed, and the garths and folds are still as

green as in summer. A column of blue smoke betrays where the woodmongers are burning undergrowth by lake shores. Early and late, if there be sunshine, winter days produce a roseate light on one side of the deep valley and misty shade on the other, a contrast so striking that no summer visitor would believe it.

Truly, no stage scenery, no stage lighting, can vie with the constantly-changing natural lighting and natural scenery of the lakes and fells



Anso-color by W. Suschitzky

A Comparison of Castles

I. Ludlow

Ludlow Castle, where Milton's Comus was given its first performance in 1634, is one of the most interesting of its type in England. Founded soon after 1085 by Roger de Lacy in a strategic position on the Welsh Border it was for many years a stronghold of the Earl of the March, later becoming the seat of the Lords President of Wales. Owing to its commanding site on a high rocky peninsula, it was the last Shropshire fortress to surrender to the Parliamentary Army in 1646, fortunately escaping injury at that time; not until after the Court of the March was finally abolished in 1689 did the castle begin to fall into decay



The Norman conquest of England was by no means completed at a single blow, nor secured by success in battle. As William overcame each district or town he appointed a trustworthy earl to maintain his authority there with a garrison and fortress, thus giving impetus to the erection of a great number of castles which for more than two centuries were destined to play a primary role in English political struggles, revolts and warfare—between Lords and Crown, between the Lords themselves and against the Welsh and Scots. The oldest castles extant in England are Norman in origin and of two main types: the mount-and-bailey castle, with earthworks, timber palisade and a wooden keep on top of the mount;

and the stone fortress, built on an elevated rocky site and consisting of a flanked curtain-wall and ditch. Ludlow belongs to the latter class, its inner bailey (the north-west corner of the present five-acre castle) comprising the Norman original, which consisted of a roughly rectangular wall from five to six feet thick protected by a wide stone ditch, four turrets, a gatehouse (the present 130-foot keep) and a unique chapel, St Mary Magdalene, the circular nave of which is shown above. The outer bailey, its protecting ditch and buildings within both inner and outer bailies are later additions made over the centuries until the Stuart era; the original structure has also been somewhat altered

The Island of Olives

by ALAN ROSS

AN island is never what you imagine it will be; however much you read about it, look at maps or pictures, or study its history, something will evade you—the qualities of living and the type of landscape you expected to find will never be quite what you thought. It may be disappointing, or even more beautiful, but always the reality will come as a surprise, like meeting a person who has only existed through hearsay or in photographs.

Coming across the Mediterranean to Corsica is just like that—the mind's impression is suddenly broken up by a sleight-of-hand trick, when in the morning, after a night at sea, the mountains rise out of the water, green and leonine in a staring sky, and the buildings of Ajaccio burn white amongst a frieze of palms, with the coloured sailing boats showing off their wet paint in the early heat and the fishing-nets drying on the stone quay.

The harbour at Ajaccio is like something one has always dreamed of; yellow-and-pink washed houses cluster on a waterfront that trails off into beaches of red coral, with mountains rising up sheer behind, like a temperature chart against the empty sky, and sun shining on the incessant aeroplanes coming in and taking off on their way to Tunis or Marseilles.

At first sight it is a sort of Paradise—only gradually, like a dancer unveiling herself, the beauties are stripped off, and the real pattern of living revealed.

For Corsica, more than any other island in the Mediterranean, is living in the shadow of its own history—behind it, a dazzling series of heroes and events have gone dead and left an *ennui*, a lethargy so heavy that it is almost as if some sort of paralysis had set in—the wonderful western harbours and ports, like arms and legs, occasionally flicker into action, but the great body of the island, the interior and the east, are lifeless and immobile.

Somewhere the great romantic past—the past of Paoli, Sampiero, Romanetti, the bandits and vendettas—dried up, without ever creating a substitute. With the emergence of order, conflict faded out of Corsican history and with it the particular glamour of a small people fighting for their freedom.

Since 1796 Corsica has been a French

department; before that she had been overrun by the Carthaginians, the Greeks, the Romans, the Spaniards, the Germans, the British and the Genoese. For centuries she had been in a state of semi-warfare, with resistance to superior powers always bringing forth new leaders, new martyrs to oppression—and each time some form of betrayal, some inner treachery broke up the final attempt at independence and put back the clock. But all that time a quality of character was being moulded; a feeling grew up that life was important, and that it radiated out from a centre that was very much alive. Sampiero, the great Corsican leader against the Genoese, Theodor von Neuhoof, the fantastic adventurer who became the one crowned king of Corsica, Pascal Paoli, the General and legislator who, having finally organized resistance to the Genoese and, having driven them out, gave the sovereignty of the island to the British, only to see it sold out to France two years later—all these were European figures in a world where men like Rousseau, Flaubert, Boswell and Voltaire prophesied a great future for the small island that, centuries ago, the Greeks had called Callista on account of its beauty.

But under French rule, with comparative order and justice, the necessity for struggle disappeared—Corsica became just another dead-end of a Colonial Empire, drying up under provincial government, with no more incentive or ambition to assert itself left. Its regionalism became absorbed into the larger unity of France.

So the centre of interest shifted—and simultaneously the great exodus began. Every year now more and more people emigrate to Marseilles, Paris or North Africa, each of them finding a greater sense of purpose away from the island that was overweighted with the torpor of its own past. The graph of its own history trickled down into the apathy of the present-day labourer, fanning himself under the palm trees, with absolutely nothing to do. For the island, on its poor but adequate standard of living, more or less runs itself—there is no elemental struggle to earn a livelihood. Instead, from the fishing and vineyards, from timber and corkyards, from chestnuts and olives, enough wealth is produced through export to the Continent to enable the islanders—those that



From a wash-drawing by John Minton

Graveyard in Corsica

are left of them—to live comfortably on a few weeks' work a year. For the rest, there is endless time on their hands, with no urgency at all, and plenty of leisure to sit in the shade of the great mountains and watch the blue sea pouring itself backwards and forwards against the stiff branches of the palm trees.

Each year the émigrés come home for their holidays from France or Africa—and for a few weeks life, like blood, trickles up the river arteries into the isolated hill settlements. Then in the autumn, with the rust-coloured maquis pushing up round the foaming chestnut trees, the island becomes deserted again—an abandoned airfield, that is only a half-way house from Africa, a refuelling station, a black market for drugs.

Before the war, Corsica lived on its beauty, one might almost say, *for* beauty—the tempo of life was so leisurely, there was an abundance of food and wine, wonderful climate, and enough visitors every summer to make it all very profitable in a pleasant sort of way. In some places, Calvi or Ile-Rousse for

instance, it was even smart, a fashionable part of the Riviera that had slipped its moorings and become an anchorage for delicately-built yachts, a day's sailing from Cannes.

But, unfortunately, it hasn't lasted—Mussolini saw in it an ideal naval base, a beautiful, tropical key to the Eastern Mediterranean, and when that dream broke, the damage of successive Italian, German and Anglo-American occupations had been done. The innocence had burst like a bubble, and in its place a calculated, rather seedy commercialism developed—running tenuous lifelines to the Continent where a ready market existed for luxury foods, and from where the first symptomatic symbols of the chromium world were imported, a little out of date, but enough to satisfy the native's sporadic desire.

So all the towns are divided up into two—an old part with tiny, cave-like dwellings, narrow, cobbled streets piled with refuse and devoid of sanitation, and a new part with brassy bars, a cinema and slightly down-at-heel cosmopolitan hotels. But the attempt

at sophistication never quite comes off—the railways peter out into marshes, the projected houses are never finished, the new factories never built. The imagination has given out between the conception and the execution—like everything else, not worth the effort; because life goes on just the same anyway, with the sunsets running out in pink and bleaching the houses nightly in soft beauty, and the hills growing mauve and then black over the glittering, mooned water. “What”, they say, “would be the point of development? It is enough to keep off the flies and the malaria, to avoid the heat, and get the vine crops in.”

And as you move over the island—all mountain save for the narrow strips round the coast—past the miniature villages built into hillsides for no apparent reason, with no more life on them than a few goats tinkling their bells, and silent shepherds staring out over the dried-up valleys, it becomes obvious that indeed life has ebbed away, with only a high-water-mark of boarded-up buildings, shut-down churches and derelict huts left in the assertive, operatic landscape. The tiny hill railway and the mountain buses twist through vista after vista of magnificent forest growing up to gaunt peaks, fir, pine, chestnut and olive stretching up around bald patches of scrub, and the thick scent of the maquis rolling down under the cloudless sky. But after a while even the beauty becomes a drug—it is all inanimate, too inhuman and filled in like a postcard, so overcharged and complete, there is nothing left for the mind to work on, and the blue comes down to the edge of the hills like a child's drawing of the sky, so there is scarcely room to breathe with the expressionless weight of it all.

Everything is much smaller than one imagines—the island only fifty miles across, though it takes a day to travel it, and the towns less successful, less developed than the map showed. There is no architecture of any consequence in them, little to show that they had been planned or conceived in accordance with an idea. For the most part they are citadels—like Corte or Bonifacio—with towns added on to the garrisons; only now the garrisons are deserted and the towns exist on their own, even though they have outlived their functions.

The day's activity stops at about ten in the morning—afterwards everyone just sits about, staring or watching, looking as though they were waiting for a revolution, or simply for the effects of an injection to wear off.

But the revolution will never be realized—something happened a long while ago and now it is all over. Instead, the political slogans are bandied about in the cafés, in remote mountain villages and in houses, but all meaninglessly and exaggeratedly, as if it were part of a game; and, sitting about in their white-drill suits drinking *pastis* in Ajaccio or sweating in their stale shirt-sleeves in the desert swamps of Porto Vecchio, they are all aware of it. Life has passed by like an army, leaving a camp-following, some refuse and little else.

In deserted parts of the island, handfuls of German prisoners work on the roads—using up time in hot burning afternoons on streets that lead nowhere. All round, cicadas croak in the marshes, and small children with dark, beautiful eyes and sores growing on their papery faces stare out at the cactus and fig trees, the motionless sea lying at the foot of the hills, while old, lined women in black struggle through the heat with pitchers of water balanced miraculously on their wrinkled heads.

At night in small cafés by the sea, boys sing to guitars, the voices going out over olive groves to the water, with stars lying on the surface like tin flowers. Then twice a week the boats come in to Ajaccio from Marseilles and Algiers, and interest rises like a wind getting up. For a few hours the streets are full; the smart negresses stalk about in pale shorts down the main streets, and the dominating wives of sweating business men push through the market stalls heaped with melon and peaches, and flop down at tables outside the swankier hotels. The bead curtains move in the side-streets, and interest stirs in the ageless eyes of the watchers. Then in a few hours it is all over—the streets grow empty again, and the curtains rustle back into place, with the flies festering over the filthy streets.

Everything is beauty and loss—life has given way to resignation, struggle to patience, religion to apathy. Only the sunsets and the marvellous dawns touch the landscape into movement, like sudden, compassionate acts of God—then all over again the problem of passing the time begins, with each day the same.

Yet, behind the island, one leaves part of oneself behind—and although the scenery, the peace, the blue sea breaking in white mouths on the beaches, are a perpetual invitation to come back, you know that somehow you never will.

(Mr Ross and Mr Minton will be recording their impressions of Corsica more fully in a forthcoming volume to be published by John Lehmann Ltd)



Herdsmen of Appenzell

Photographs by
H. P. KLAUSER

Heart of the pastoral life of Inner-Rhoden, the southern and more mountainous portion of the Swiss Canton of Appenzell, is the mountain chain called after its highest peak, the Säntis. (Opposite) At the foot of the Säntis (8145 ft) lies the Siebenhütten Alp, where herdsmen from a village down in the valley spend each summer. They live in the huts, also used for cheese-making; the adjacent barns are for cattle of (below) the hardy and gentle brown Swiss mountain breed. (Right) As a Sunday morning recreation, the herdsmen swing the heavy cowbells and yodel to the rhythm of their ringing. These great bells are worn by the cows only during the springtime ascent to the alp (Alpfahrt) and the descent in late autumn (Alpabfahrt) to the valley



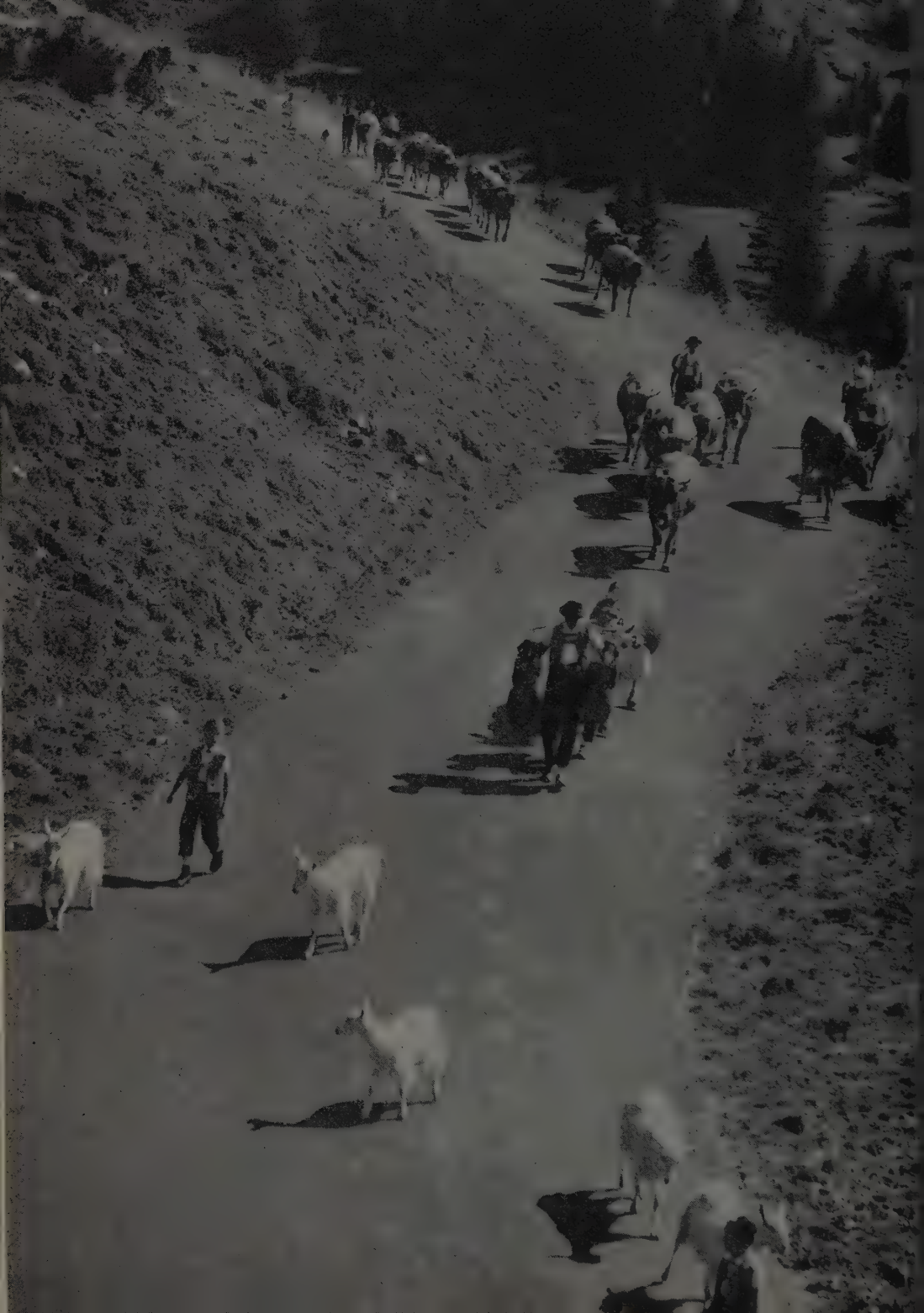


(Above) An Appenzell peasant milking his goats. They, like the cattle, are taken by their herdsman every spring up to the alp (a term applied to the summer pastures of the Alps). The men drink much goat's milk in order to save cow's milk for cheese- and butter-making. (Right) Milk buckets being transported by a young herdsman in the traditional alpine manner. They are hand-made of white maple and skilfully carved by peasant craftsmen; in most villages two or more of these artisans are engaged in making wooden receptacles for the various dairying processes. Thin maple boards are soaked in water till soft enough to be bent, and later, when made up, are dried at a uniform temperature

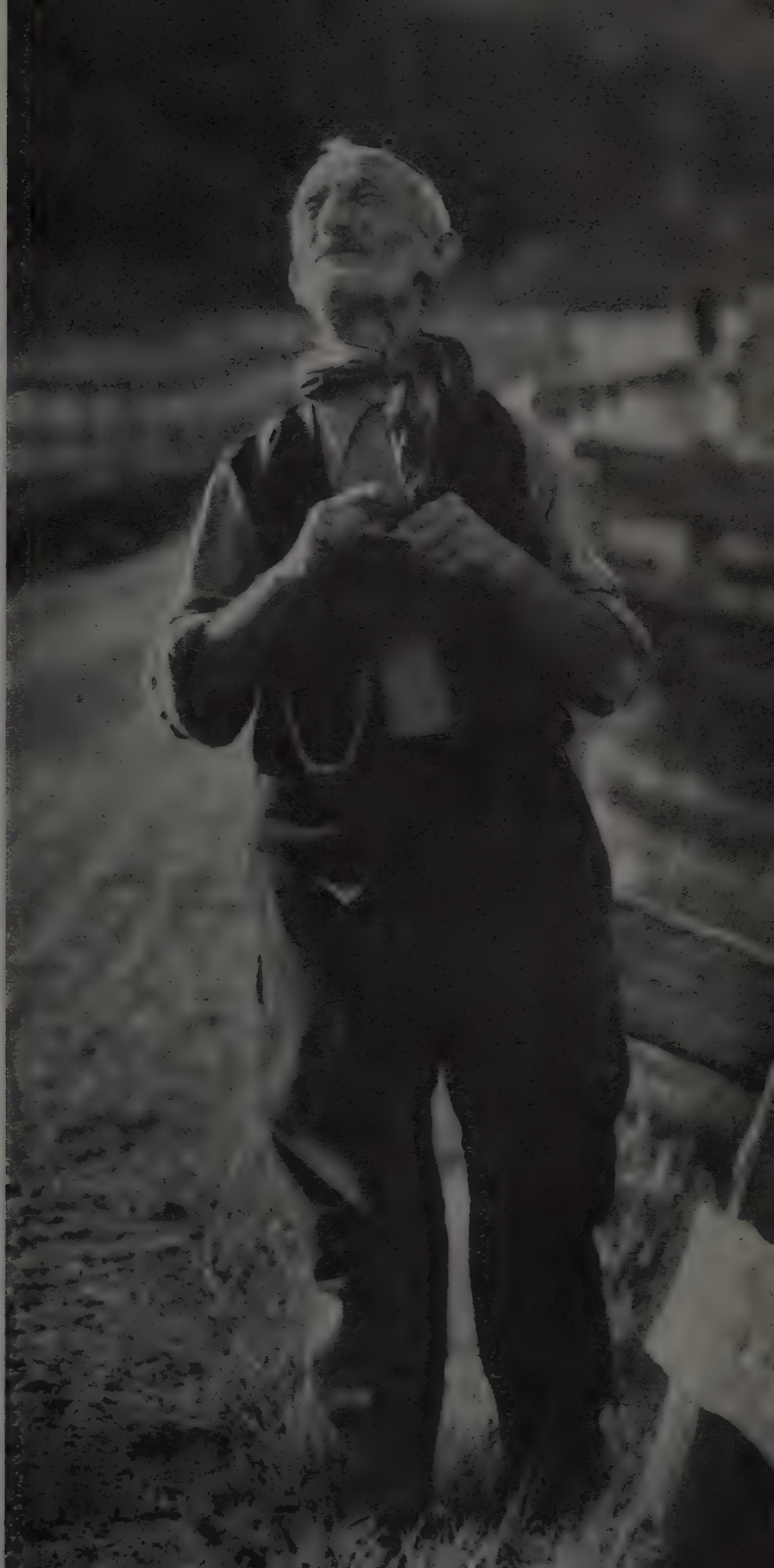




(Above) The mountain air gives each herdsman of Appenzell a keen appetite. Breakfast consists of bread and butter dipped into a bucketful of goat's milk, and followed by a pipe of strong tobacco. This meal is eaten in the huts of the alpine cooperatives (Alpgemeinden), most of which own two separate alps, complete with buildings: one for spring and autumn and another, higher up the mountain, for midsummer. (Left) A handsomely carved cheese vat. The curd from coagulated whole milk remains inside it while the whey runs out through the spout and is caught in a wooden bucket hanging below. The resultant widely famed Swiss cheeses remain in storage within the huts until autumn



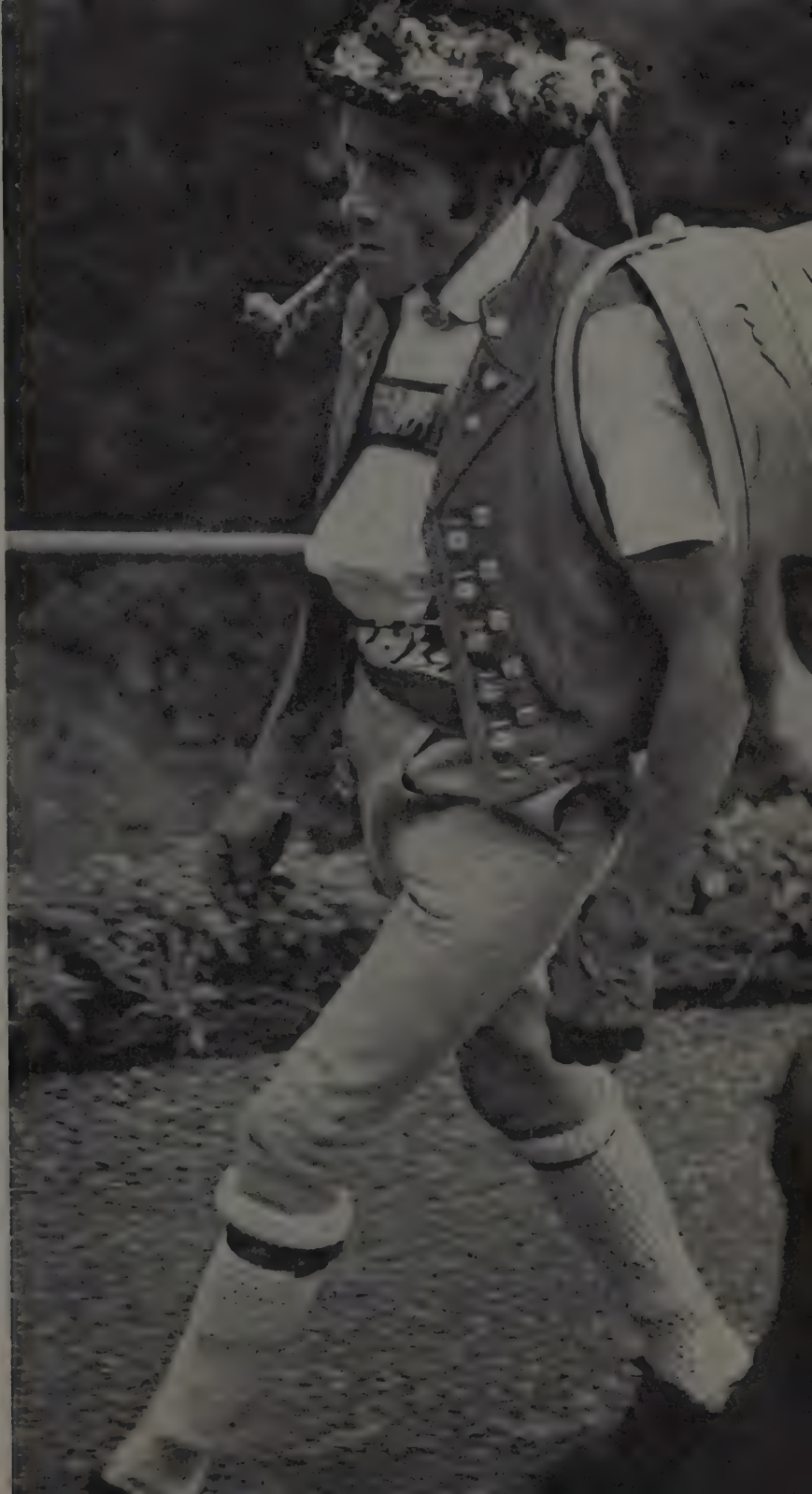
(Opposite) The spring *Alpfahrt*, a festive day for the peasants of Appenzell, when the goats and neat brown cows are driven up to the hilly meadows of the Säntis by herdsmen yodelling to the accompaniment of cowbells. They are making their annual ascent to one of the many Swiss mountain communities owned by alpine cooperatives (*Alpgemeinden*) composed of village communes and private persons; each member possesses the right to send a certain number of cattle up to the alp, the maximum quantity of livestock which it can support without permanent impoverishment being fixed by the *Alpgemeinde*. (Right) An old villager observing the ascent with wistful memories of his own springtime when he, too, used to go yodelling up the mountain-side with carefree comrades to spend a busy summer on the alp. Old and young alike turn out to wish the herdsmen good luck and a safe return the next autumn





An old lady of Appenzell capital of Inner-Rhoden happily watches the autumn descent of herdsmen with their livestock to the valleys. Clasp- ing her rosary, she is offering up prayers of thanksgiving for their return, this annual procession down the alps always being celebrated with appropriate religious ceremonies. After the Reformation religious differences broke up the Canton of Appenzell into two half-cantons: Aus- ser-Rhoden, occupied mainly by Protestants; and In- ner-Rhoden, occupied almost exclusively by Catholics.

The Alpbabfahrt is an occasion for great rejoicing in Appenzell, as villagers come back the herds- returning from the in traditional festive ay. This gaily clad peasant is wearing white socks and shirt and yellow breeches. His embroidered jacket is light red, and its buttons, as well as the brooch and ornamentation on his impressive pipe, are silver. His braces, lavishly embellished with brasswork, have been polished until they shine like gold, and his hat is trimmed with sprigs of alpine flowers.





In Appenzell many of the bases of milk pails are painted with bright-coloured scenes by talented villagers. It is customary to represent the Alpfahrt and often the farm-house of the owner as well as his name. Peasant artistry is, indeed, applied to almost all the articles that are in daily use in these alpine communities

The Indians of Guatemala

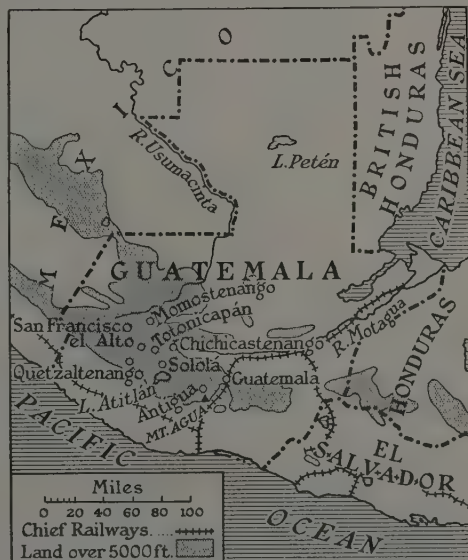
by SIR HARRY LUKE, K.C.M.G., D.Litt.

GUATEMALA is first in population, second in size of the Republics of Central America, the land, as Sacheverell Sitwell calls it, "which dwindled but would not end". It is bounded on the west and north by Mexico, on the east by British Honduras, a colony which it now claims in its entirety, on the south-east by the Republics of El Salvador and Honduras; and it has, like all its Central American sister-Republics except El Salvador, both a Caribbean and a Pacific sea-board. Its area is 45,452 square miles and its population about three and a half millions. It is the most Indian in blood of the Central American States, the majority of its inhabitants (reckoned at between 60 and 70 per cent) being pure Indians; this majority—and herein lies the country's most interesting feature—live as Indians, speaking various dialects of their own Maya tongue, wearing their traditional costumes and adhering to their ancient ways of life. The other section of the population, known as Ladino, is that which is not professedly Indian, although most Ladinos have Indian blood in their veins to a greater or lesser extent. The Ladinos are subdivided into *criollos* (Creoles), of pure Spanish descent, and the infinitely more numerous *mestizos* of mixed Spanish and Indian origin; but all are Spanish-speaking and live in the European style—and they rule Guatemala.

Our first objective after reaching Guatemala city, 5000 feet above sea level—that bright, bracing, sunny capital of wide avenues and open spaces, with one of the world's most perfect climates—was the heart of the Maya country: Lake Atitlán with its circle of volcanoes, of impressive but sombre beauty; Sololá (meaning "Weeping Willow"), capital of the Kakchikel tribe; Chichicastenango, cultural and religious centre of the Kiché people; other Indian towns of the Highlands beyond. It is in her two millions and more of living Maya, in their dress, their beliefs, their *costumbres*, their *cofradías* (religious confraternities), their arts and crafts, their preservation of the life of pre-Columbian America into the 20th century, that Guatemala, if she will realize it, has the most to offer.

"In the century that preceded the arrival

of the Spaniards in their territory," say Gann and Thompson in their *History of the Maya*, "the Maya were engaged in a series of internecine wars that rent the country and did much to facilitate the Spanish Conquest." In Yucatan civil war had brought the brilliant Maya "New Empire" to an end shortly before America was discovered. In the Highlands of Guatemala, peopled by a number of kindred Maya tribes such as the Kiché, Kakchikel, Tzutuhil, Rabinal and Mam, the dominant Kiché had aroused the jealousy of their neighbours to such an extent that when the Spaniards arrived in Mexico the Kakchikel appealed to Cortés for help against them. Cortés, glad of the excuse, was only too willing to oblige. Promptly he sent the bloodthirsty young Pedro de Alvarado in command of an expedition to subdue the whole of Guatemala, which Alvarado proceeded to do by liquidating the tribes one by one as Hitler hoped to do with his enemies four centuries later. It is in perpetual execration of the treachery of the Kakchikel that the effigy of Judas, whom the Kiché of Chichicastenango hang annually on Good Friday over the door of



A. J. Thornt



Dorothy Hosmer

The little Maya Indian of Guatemala is highly mobile, and will trot as far as thirty miles a day, up and down hill, carrying a laden cacaxte on his back, for he is unable to afford a donkey

their church, is dressed in the costume of Sololá.

Alvarado had also the support of a Mexican contingent whose numbers Spanish historians place at 300 and the Indians at 20,000. The ending *-tenango* (meaning "the place of") of so many Guatemalan place-names is Aztec and a heritage of Alvarado's Mexican allies. Another heritage is recalled by the American traveller John Lloyd Stephens in his *Incidents of Travel in Central America, Chiapas and Yucatan*. Visiting the ruins of Almolonga, first Spanish city of Guatemala, in 1839, Stephens met there "a deputation of Indians consisting of the principal chiefs and women, descendants of caciques of the Mexican auxiliaries of Alvarado, calling themselves, like the Spaniards, Conquistadores, or Conquerors; they entered, wearing the same costumes which their ancestors had worn in the time of Cortez, and bearing on a salver crossed with velvet a

precious book bound in red velvet, with silver corners and clasp, containing the written evidence of their rank and rights. It was written on parchment, dated in 1639, and contained the order of Philip the First, acknowledging them as conquerors, and exempting them, as such, from the tribute paid by the native Indians."

The Maya tribes of Guatemala must be among the most tenacious people in the world. What with a ruthless and brutal conquest, followed by subjection to a foreign race since 1524, a process that has involved centuries of physical and mental oppression, it is amazing that they have had not only the heart but the inner force to cling to what they hold dear. That in the main they have managed to do so is largely due to their cherished costumbres, which are not so much customs as a complete way of life. And here something must be said of their religion as they practise it today, for with the Maya religion pervades every aspect of daily existence. "To Christianity"—to revert to Gann and Thompson—"not as a new and separate religion but as an extension and amplification of the one they already practised, they

seem to have taken kindly from the first." But by the Christianity to which the Maya took so kindly must be understood a series of observances which blended with and formed a logical complement to their own, and not a body of doctrine. The blending was facilitated by the fact that not a little of the externals of Christian symbolism was common to their own religious inheritance. They had always practised a form of baptism, a form of confession, celebrated a form of communion; the cross was familiar to them as their own symbol for the four winds, the four points of the compass and for immortality. "Elaborate ceremony," say Mrs de Jongh Osborne and Miss Kelsey in their admirable *Four Keys to Guatemala*, "incense, prayers, music, images as symbols of deities were known to the Indians long before Christianity arrived on horseback." In short, Christianity was not so much a new veneer on the original Maya

religion as a graft onto the ancient stock of their beliefs, ultimately resulting in a fusion of the two which often makes it difficult to recognize where the one ends and the other begins. The process was also helped by the readiness of the Spanish clergy to adopt, and adapt, some of the symbolism of the Indians. It was, in fact, a two-way traffic.

There is no better object-lesson in all this than a visit to Chichicastenango on one of its two market-days, Sunday and Thursday, preferably on the former. The name of this heart of the Kiché country and life means "the place of nettles"—the purple tree-nettle which grows profusely throughout the region. On these days the Indians from a radius of many miles, wearing their beautifully woven and embroidered clothes that differ according to tribe and district, converge upon Chichicastenango with their wares, intent on buying and selling but even more intent on the fun of striking a bargain, on meeting their friends and, above all, on the performance of their religious duties. For these little Indians are highly mobile. They are for ever transporting their products—pottery, textiles, maize, vegetables—from market to market, from fair to fair. But they use no vehicles, no beasts of burden. These thin, frail, often anaemic and sickly folk are their own beasts of burden and contrive to carry enormous loads on their bowed shoulders on wooden frames (*cacaxtes*) supported by headbands of rawhide across their foreheads. And yet they seem always to trot, even though they will travel thus encumbered as far as thirty miles and more in a day and climb and drop and climb again thousands of feet in so doing.

The Kiché are a tiny people. Many of the men and women are no taller than four feet six inches, wizened and spare (although the women are often the more squarely built), and people over five feet are the exception. The women wear kilts to the knee (the shortest form of skirt of any Guatemalan Indians), and round their necks, over the embroidered *huipils* (blouses), strings of large

silver beads. The men wear knee-breeches of black homespun wool with wide, embroidered, projecting pocket-flaps, and sleeved jackets of the same material. The embroidery on the flaps takes the form of sacred symbols, such as the cross, the sun, the sun and stars, and merely denotes the age-group of the wearer. When worn, however, on the front of the jacket the symbols are emblems of office. The men also wear on their heads a sort of turban. It has been argued—but not proved—that the breeches are derived from a form of 16th-century Spanish peasant dress. Against this theory can be set the assumption we may safely make that Spanish peasants in the ranks of the Conquistadores are unlikely to have gone overseas in mufti.

On the heavily worn semi-circular steps leading up to the church the Indians burn, on a block or altar of white stone, lumps of incense made of gum copal, which they call *pom*, while the women and boys wave more

Men of the Kiché tribe, Chichicastenango, wear purple turbans and black homespun wool jackets and breeches. Sacred symbols embroidered on the back pocket-flaps denote the wearer's age-group

Dorothy Hosmer



incense in earthenware censers. Here, on the steps outside the church, the people are performing a pagan rite; but, once inside the church, their paganism blends with the Christianity imposed on their ancestors at the Conquest in a synthesis of worship of the Great Spirit under Christian forms. First they go to the High Altar, where the receptacle wrapped in a cloth, in which they have brought their offerings of candles, corn-cobs, rose-petals, white flowers, bunches of herbs and branches of cypress, is waved over their heads in the sign of the cross by a *chuch kahau* (literally, "mother, our father"), one of their tribal holy men. Then they lay out their gifts on the flagstones of the church, neatly arranged with the candles in line, and the flowers, rose-petals, pine needles and other greenery disposed in patterns; small coins are scattered at intervals on little pieces of embroidered cloth, to be given to the Christian priest when he says over them some prayers for their dead. The round discs of gum copal for the incense are made up in packages of the dried husks of corn-cobs, and soon the church is filled with the pom's aromatic smoke. Then the men bend over their family display and at considerable length address to the Great Spirit very precise injunctions as to what they expect of Him—such as good crops—in return for their offerings. All these incantations are made by the worshippers in their individual family parties; at our first visit (at our second the east end of the church was down, having been demolished by an earthquake) we saw thirty or forty such groups separately conducting their religious exercises on the floor. All were in deadly earnest. As Father Ildefonso Rossbach, the old German-American Jesuit who had looked after them for thirty-six years (he died in 1945), said to us in the church, they do not understand or accept such subtleties as the doctrine of the Trinity, but they are offering true worship.

Having concluded their colloquies with the Great Spirit on the floor of the Church, they go the round of the statues of the Saints at the side-altars, and to each of these they talk seriously, firmly, at length and "as man to man". Finally, they cross the market square to the Chapel of Calvary at the other end to make obeisance to the realistically carved figure of the dead Christ, recumbent in a glass case.

The *fiesta* of Saint Thomas, patron saint of Chichicasteango, is celebrated the week before Christmas and is enlivened by several traditional dances, perhaps better described as mimes. Among these is the "Dance of the Conquest", in which the people commemorate

the defeat and death of their king, Tecum Umam, in 1524 at the hands of the conqueror, Alvarado. It may seem strange that the Kiché should wish to recall the destruction of their kingdom and the loss of their independence with dancing and miming, but there may be method in their madness. This particular dance is performed by two sides, the one taking the parts of the ill-fated king, his captains and his four small children, the other, those of Alvarado and five of his henchmen. All wear wooden masks, the handiwork of the town's hereditary mask-maker. And here is where the subtlety of the poor Kiché comes in. Alvarado, brave but avaricious and savagely cruel, was a fair man with reddish hair and beard. The masks worn by those taking the parts of the conquering Spaniards depict blond, curled, hook-nosed men with gilded moustachios and gilded pointed beards. They depict men with unnaturally smooth, pink cheeks and bulging, vacant eyes. Above all, they depict men whose expressions are distorted into a foolish but vicious grin that is almost a rictus. They are, in fact, a portrait—the sort of portrait an enemy would make—of don Pedro de Alvarado.

On our second visit to Chichicasteango my friends and I went to see the old mask-maker, who lives in a cottage at the foot of a hill overlooking the town, a hill of a certain sanctity, as will appear. The walls of the mask-maker's room were lined with specimens of his craft; and, in the intervals of explaining the significance of these, the old man played us genuine Indian music on his genuine old *marimba* made with gourds—very different music from the rumbas and *cucharacas* played on the sophisticated "improved" *marimbas* with square wooden sounding-tubes instead of the homely gourds—that you find in the smart restaurants of the cities.

Then we climbed to the top of the hill, where, in a little clearing among the pine trees, there stands a stone idol of pre-Christian days called, like the hill itself, *Turkakh*. The idol—the Ladinós call it *Pascual Avakh* (Abaj in the Spanish spelling)—is a battered upright stone figure representing, in crude relief, a man with a flat, elongated face, sullen but otherwise expressionless features and a prognathous jaw, somehow suggestive of an Epstein figure. There is an oblique crack across the upper part of the head; the hands and arms are folded across the chest immediately below the chin; no other part of the body is suggested. The idol stands in the middle of a semi-circle of small, rounded stones; stuck in the ground to one side are four low stone crosses, also pre-Christian.



All photographs by Dorothy Hosmer

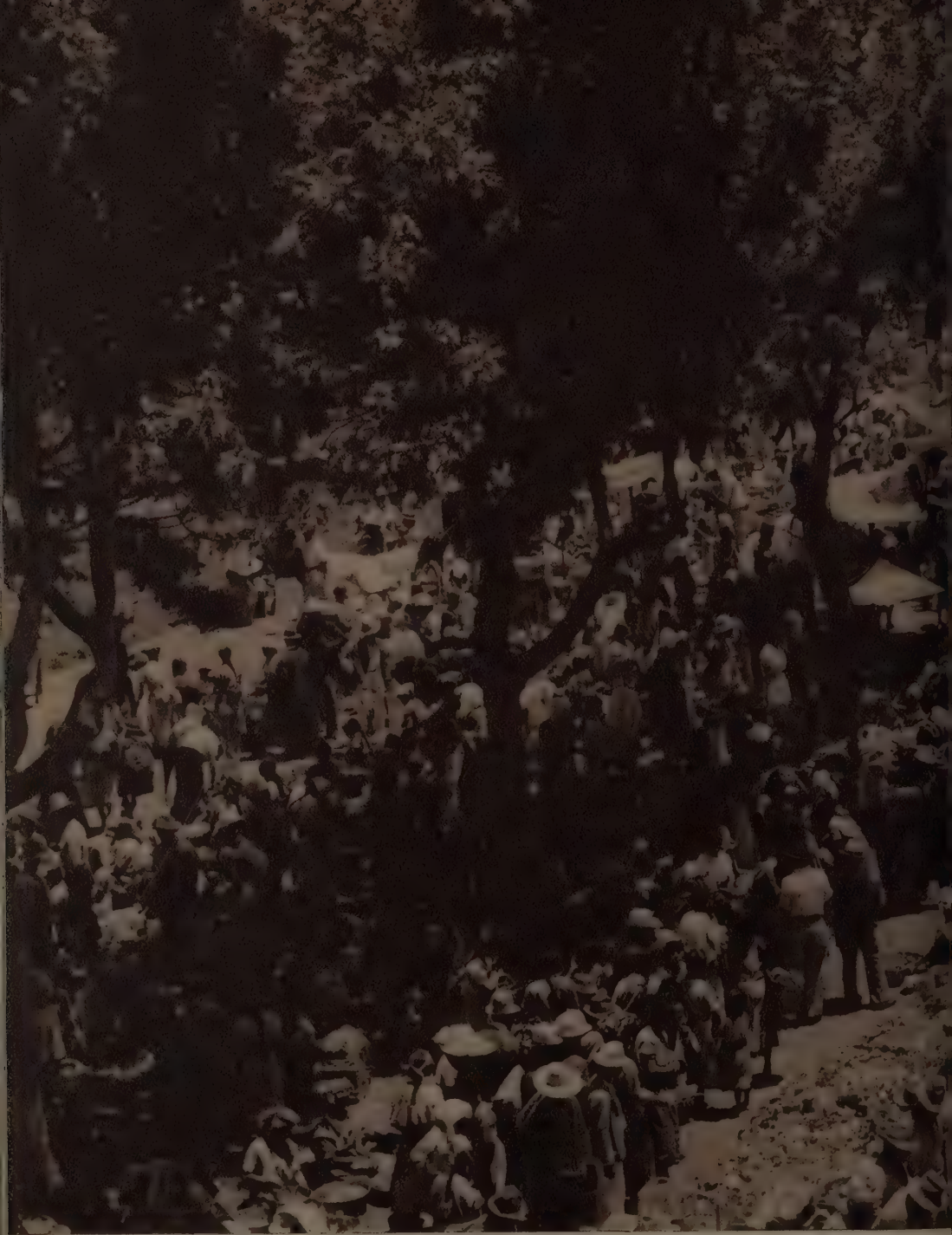
The Indian markets of Guatemala, with their rich variety of setting, of articles on sale, and colour and design of costumes, delight the visitor's eye. San Francisco el Alto, 8600 feet up, holds its Friday market in the great square outside the church. White cloth awnings keep the blazing sun off vendors and their wares



The Kiché women of Guatemala, one of whom is here shown selling holy beads in Chichicastenango, wear knee-length kilts and embroidered blouses over which hang necklaces adorned with silver beads or coins



Market-day comes to Solold, and with it these Kakchikel customers wearing black and white wool jackets and brightly striped trousers; one of the shopping bags bears its owner's name and the date it was made



In San Pedro la Union, over 7000 feet up, the market takes place in the street. The wares are spread out on a mat or cloth on the ground, behind which the vendors sit back on their heels. This is the only region—



—in Guatemala where yellow predominates in the weaving and thousands of sunny-skirted women add a peculiar glow to the brilliantly coloured profusion of fruit, flowers, pottery and gay textiles tinted with native dyes



Fiesta pageantry at Momostenango. The best-known dance of Guatemala is that of the Conquistadores wherein the Spanish Conquest is re-enacted. This richly clad figure represents a chieftain of the Maya King, Tecum Uman



Tecam Umam and his warriors are threatened by horsemen representing don Pedro de Alvarado and his Spanish henchmen; they wear wooden masks depicting blond, curled, hook-nosed creatures with gilded moustachios, pointed beards, pink cheeks, vacant, bulging eyes and foolish but vicious grins, a combination which is far from flattering. By thus burlesquing their conquerors the Mayas gain a subtle revenge for the defeat of their chieftains and the slaying of their king. (Right) Wooden fiesta masks; when painted, the one on the left will be worn by a 'Spaniard'





With prayers, incense and hieratic gesture a young Indian invokes the assistance of Christian and pagan deities alike, his wife and baby crouching beside him before the Calvario chapel of Chichicastenango, Guatemala

Before this image we came upon a solitary worshipper or client in the person of a thin, rather sickly-looking young Indian, who might have been perhaps twenty-five years old. The young man was entirely oblivious of our presence, and we watched him fascinated for nearly an hour as, alternately crouching and on his knees before his idol, he in turn (to judge from his tones and gestures) adored it, cajoled it, pleaded and reasoned with it, even upbraided it, in an unceasing flow of speech. All the time he cesned it with the fragrant, smoking pom; occasionally, he scattered rose-petals over its dour, unresponsive features and on its ears, and pine needles on the ground before it. At times he gesticulated, as a member of a race accustomed to gesticulating would do if appealing to or arguing with a friend; at others, he took one of the sticks of incense as yet unused and waved it like a baton, first at the idol, then at the points of the compass. Now and again we could distinguish in his Kiché monologue the names of the Virgin Mary and certain of the Saints. So the Christian element in this people's blended religion was not wholly absent from his talk with his heathen god.

Goodness knows how long the young man had been at his devotions before we arrived, goodness knows how long he would continue. Perhaps for several more hours, for many packages of incense lay still unopened before the impassive Turkakh. As I watched him I recalled vividly what Father Rossbach had said to us in the church two years previously. Outwardly the suppliant was addressing himself to no more than a graven image. But it was impossible not to feel—so obviously intent and sincere was his worship—that in truth he was praying to something less material than mere stone.

On this second visit we penetrated farther into the Highlands than we had done before, occasionally rising to over 11,000 feet as we drove to the sonorously named Quetzaltenango ("Place of the Quetzal", sacred bird of the Maya), Totonicapán and San Francisco el Alto. Quetzaltenango, whose Bishop bears the pleasant title of "Obispo de los Altos—Bishop of the Heights"—and signs "*Episcopus Altensis*", was in the eighteen-thirties the capital of a short-lived independent State, El Estado de los Altos, and is the second city of the present Republic. Totonicapán's parish church displays seven elaborate 17th-century silver altar-frontals, made by Maya craftsmen under the direction of Spanish priests. San Francisco el Alto (8600 feet) has the biggest market of the Maya country, makes the best *ponchos* (brightly coloured blankets), and specializes not only in attractive

woven materials of local design but in excellent tweeds of English herring-bone and other patterns. We arrived on market day, which is Friday, and appeared to be the only non-Amerindians among the thousands thronging the square and its surroundings.

The colours of a Guatemalan market, contributed by the clothes of the buyers and sellers and the wares they buy and sell, make a picture so rich and varied that a mere description in words is wholly inadequate. There are the embroideries and the textiles, in which the native dyes—vegetable, animal and mineral—continue to hold their own against the invading aniline; the straw hats of strange sizes, shapes and hues; the leather-work—belts, sandals, harness and what not. And then the fruit and flowers, of an incredible beauty, variety, abundance and cheapness. The fruit-stalls, like the flower-stalls, put the most luscious efforts of the still-life painters to shame. Here, apart from non-tropical fruits in season and the familiar oranges, tangerines, pineapples and bananas, are to be seen mangoes, pomegranates, paw-paws, star-apples, custard-apples, soursops and sweetsops, granadillas, sapodillas and a host of other exotic products, crowding one another in brilliantly coloured profusion.

I have attempted to convey above something of the unique quality of Indian Guatemala, but there is another Guatemala worthy of attention, "the Kingdom of Guatemala", as it was styled, of Colonial Spain. The half-ruined but still inhabited Antigua, originally and properly "La Muy Noble y Muy Leal Ciudad de Santiago de los Caballeros de Goathemala", was once the greatest city between Mexico and Lima. In the days of its glory Antigua boasted more than one hundred churches, monasteries and convents, a flourishing university (with several faculties and hoods for each degree), a mint and a population of 80,000. Then came the catastrophic earthquake of 1773, which resulted in the creation of the present Guatemala City, twenty-five miles away.

It cannot be said that Spanish Colonial government was much of an improvement on the methods of the Conquistadores, for while just within narrow limits, it was not only repressive but stupid. Antonio Batres Juaregui, descendant of the Conquistador-historian Bernal Díaz who settled and died in Antigua, and himself an historian, came to the conclusion that the evils of the régime "buried the Colonies in an immense tomb sprinkled with a few drops of Holy Water". But the future was to show that there could be something worse. With all its glaring

faults Spanish rule maintained order in Guatemala and made possible a standard of life and culture not markedly below that of Spain itself, although that standard was maintained for the exclusive benefit of the Spanish ruling class. Yet order there was; and when we read of the lavish social life of the capital, when we read of the university at Antigua with its degrees and hoods and admire today its well-preserved halls and *pátios*, when we see the other buildings, civil and ecclesiastical, that survive, we must find it difficult to reconcile conditions in the kingdom of Guatemala before 1821 with the almost unbelievable chaos and ruin that followed shortly upon independence. Judging from the accounts of Stephens and his contemporaries, the country had sunk by 1840 into a state of barbarism unknown in Central America since the Maya first became a settled people with their discovery of the cultivation of maize.

Things now are no longer as they were in 1840, when instead of government there was a vacuum; for politics, no less than nature, abhor a vacuum. Even so, the lot of the Indian today in Guatemala as in other Latin-American countries is not only hard and laborious; it must often lack the stimulus of something to look forward to, can include few joys other than the ephemeral one, quickly followed by nemesis, of getting drunk on State-manufactured *aguardiente*. The politicians talk of liberty, democracy and similar blessings, but what they mean is liberty and democracy for the Ladino quarter or third of the population. These democrats have never attempted to make the inarticulate majority—the Indians living as Indians—feel that they are a part of the State and nation, still less that they *are* its majority. There is complete dichotomy between the two sections of the population. Bad things have been done to the Indians during the greater part of the post-Conquest period; latterly a few better things have been attempted, such as the abolition of legal peonage and the Ubico Administration's law of 1938 whereby the Indian can no longer buy his *aguardiente* by the glass but only by the bottle. But even where good has been done, it has been done for the Indian at the will of the Ladino minority of his own country. The Indians refer to themselves in Spanish as the *naturales*, the natural-born people of the land; but they have no say in their own destiny. The catch-phrase of the Republic as exemplified in its motto, "Libertad", has no application to them. They do not sit in the National Cortes and help to make the laws of their country; there are no Maya

deputies for Maya districts as there are Maori constituencies and Members in the New Zealand Parliament and a Maori Minister in the Cabinet. Not since the saintly Bartolomé de las Casas in the early 16th century has there been a "Protector of the Indians". "Liberty" meant the liberty of the Ladino *vis-à-vis* Madrid; it does not mean the liberty of the man who more than any other is the true Guatemalan. The newspapers sometimes declare that the country's principal problem is the Indian. In other words, the 30 or 40 per cent regard the 70 or 60 per cent not as a part of themselves; they regard them as a problem only external. They would have heard with horrified incomprehension the remark made to me by a fellow-visitor to the country, not wholly in jest, that it was the Indians who had a Ladino problem.

So it is no wonder that the Indian retires into his shell, becomes reserved and silent. And no people was ever so silent: hardly a sound other than an occasional mutter *sotto voce* is audible at their densely thronged markets. It is no wonder that he seeks refuge in his own *costumbres*, in his own way of life (so far as he can cling to it), in his worship of and communing with his ancient gods blending with the partially understood God and Saints of his conquerors.

We must be fair to the Ladinos. They are living in the 20th century; some, perhaps, would like to live in the 21st; the Indians are living in the 15th. No doubt, the Ladinos have an Indian problem, but they should pose it aright. Their true problem is to help the majority of the Guatemalan people, namely, the Indians, to sustain and preserve their identity, their racial integrity, their human dignity and their arts and crafts, to help them to feel that they are part and parcel of the nation, not merely a class of helots. And this is their problem not only for ethical but for practical reasons.

Guatemala is a country widely visited by travellers, to whom it has much to offer. But the travellers—mostly from North America—who flock to it and spend their money in it come partly to enjoy the superb scenery and perfect climate of the Highlands, but even more to observe the Indians, their costumes and their customs, to attend their fairs and markets, to buy the lovely products of their looms and their other handicrafts. Some are also rightly attracted by the architectural remains of Colonial Spain. But what is certain is that nothing the Ladino can show is ever likely to tempt—except for business purposes—one single visitor to come to Guatemala.

Farming in Denmark

by MARGARET DIGBY



In South Fyn, "the garden of Denmark"

Miss Digby, who is Secretary of the Horace Plunkett Foundation, has visited Denmark on several occasions in connection with the Foundation's work as a research centre for agricultural studies

EAST ANGLIA dips under the shallow North Sea and re-emerges in the sandy coast of Jutland. Structurally, the country is the same; the chalky base, the low rolling hills covered with glacial drift, sometimes thin enough to allow the chalk to be quarried; the Chiltern-looking beechwoods; the sandy heaths, the peat of dried swamps and lake beds; the broad arable acres; no rivers of any size, for there is no high ground to feed them, but calm shallow lakes and inlets of the sea, like the Menai Straits for richness of wood and farmland, but without the Welsh backcloth of mountains. The moist windy air, the changing brightness of cloud and sun are the same.

But all that is man-made in the landscape has changed with the intervening band of salt water. There are hardly any villages, straggling or clustered. There are country towns, which may be ports and the centre of an industry of some importance, such as

shipbuilding. Out in the country the village church with its crowstepped, whitewashed tower stands isolated. For monuments still more ancient there are the round barrows breaking the sweep of pasture or wheat field and the circle of glacial boulders where the village elders once took council. The wide landscape is scattered with farm-houses, low, white-walled, sometimes half-timbered, with tiled or thatched roofs and an imposing quadrangle of farm buildings to house livestock and fodder through the wild, cold winters of this most windswept of countries. No hedges, or if there is anything that resembles a hedge it is a wind-break, not an enclosure. The abundant cattle, Red Danish and Black-and-White Jutland, graze tethered in rows, cropping the field as methodically as lawn-mowers.

There is little permanent pasture, much temporary grass, clover, lucerne. The Danes



For generations the sandy soil of West Jutland has resisted the Danish farmer's efforts at reclamation and large areas grow little but heather. Farther east, however, much formerly barren land—

are expert growers of pedigree grass seed and export it to other countries. But, more even than eastern England, it is a country of grain and roots. There is much more rye than in England but also good wheat, excellent barley and oats. Yields are among the highest in the world, but this is not due to the bounty of nature, for much of the soil was largely barren, waterlogged and acid till within living memory. Today the soil of Denmark is almost as much man-made as the soil of Holland. Throughout the last quarter of the 19th century and the opening of the 20th, the Danes laboured to drain their sodden fields, to nourish heath, bog and poor pasture with lime and marl, manure and fertilizers, to make land where once had been lake or fjord. A private organization, the Heath Society, began the work as an answer to the German seizure of Slesvig in 1864: "What is lost externally is to be gained internally". Later the State helped with funds, and finally took responsibility for projects of its own. Through the years of unemployment between the wars, work was found and the land re-

claimed in one single operation, and in no more than a long lifetime, some 2,000,000 acres of productive land have been added to the farming resources of a small country.

The Danish farm, like the Danish field, is a product of thought, not chance. During the late Middle Ages, the peasants sank to the condition of copyholders on great estates, but they were never dispossessed. They had the protection of the Danish kings, and from the end of the 18th century a series of agricultural reforms gave them first personal freedom, then security of tenure, finally freehold possession. With this went measures to prevent that break-up of peasant farms into tiny scattered units, by the processes of inheritance and dowry, which is the curse of so many agricultural countries. As the rural population grew, there followed, in the last years of the 19th century, a deliberate policy of land settlement. Many reclaimed areas, many of the former great estates were broken into smallholdings. Neat, toy-like cottages, with their orchards and shippens, were strung out along the highway, each with its chequer-

board of grain and roots and pasture stretching in a narrow oblong behind it. But the demand has always been greater than the supply.

Today it is still the small or medium-sized farm rather than the cottage holding which is typical of Danish agriculture. The farm may be twenty acres, forty, eighty, perhaps more. Most of the work is done by the farmer and his family. If there is paid labour, it is rarely that of the married farm worker, established for life in his own cottage, with no intention of changing his employer unless he must. It is rather that of young men and girls, themselves the sons and daughters of farmers, who live in their employer's house, share his table and his family life, and acquire that experience of farm and home management which, human nature being what it is, they might not so readily or so gracefully have learnt from their own fathers and mothers.

Though work is hard and hours long, the standard of living on these farms, small by British standards, is surprisingly high. Houses are good and spacious, well furnished and well kept. Books and wireless, papers and magazines, both technical and general, con-

stitute a claim to high thinking accompanied by anything but plain living. Much has been written of the Folk High Schools, which have given to Danish rural society so much of its homogeneity and its culture. They too were a reply on the spiritual, as land reclamation was on the material, level, to the loss inflicted on Denmark by Germany nearly a century ago. They have never taught technical agriculture nor even agricultural science. Agricultural schools exist for that purpose, but they came later. The Folk High Schools were to build a community and a nation, not through the hysteria of blood and soil, not through the art-and-craftiness that seems to dog the word "folk" in England. They taught history, poetry, legend; they gave no small place to music and to teaching that was frankly and unashamedly ethical. They were and are the university of the Danish farmer, not so much for the knowledge or even for the intellectual training he gets there as for the contacts he makes with his own generation of farmers-in-the-making and for the kind of unworldly and yet dynamic community in which he is immersed at an impressionable age.

One result has been that Danish agricultural business has been lifted bodily from the

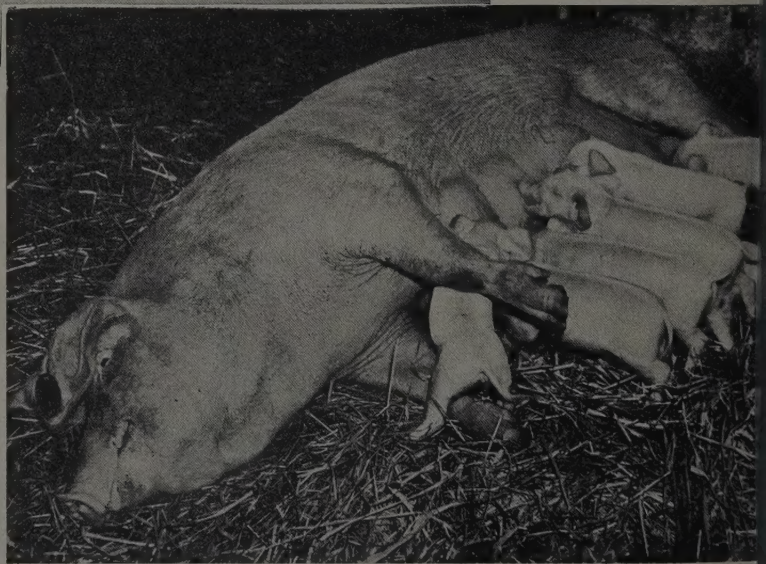
—has been rendered productive; and here the abundant black-and-white Jutland cattle graze tethered in rows. There are hardly any villages: the landscape is dotted with low, whitewashed farm-houses





A Red Danish prize bull. Careful breeding and cheap imported feeding-stuffs made possible the high pre-war milk yield of Red Danish cows. But in 1945, without foreign oilcake, etc., the average milker of this remarkable breed still yielded over 700 gallons of milk. In 1938 Danish butter exports to Britain totalled 260,000,000 lbs; in 1946, owing to the shortage of imported feeding-stuffs, Denmark could only send 107,000,000 lbs to Britain.

The Danish pig "was created to suit not the Danish, but the English palate, a race as uniform as mass-produced cars on a conveyor-belt, and no less austere stream-lined". Danish bacon and pork exports to Britain were 399,000,000 lbs in 1938; they were reduced in 1946 to 105,000,000 lbs for the same reason as in the case of milk exports





Large farms, such as that in Zealand of which the buildings are shown above, are a rarity in Denmark. About half the farmers own less than 25 acres; nearly 90 per cent own less than 75 acres. Thus, most Danish farms, being small, are not highly mechanized; even on the larger farms, milking by hand (right) is as usual as milking by machinery



All photographs by courtesy of the Royal Danish Embassy, London

commercial to the professional level with a spectacular gain in efficiency, by means of the cooperative movement. The cooperative creameries, dotted conspicuously over the country, were built by farmers who knew each other too well even to trouble to register a company. No capital was subscribed, but the bond of each member of the group, pledging his whole fortune to the undertaking and promising his whole output of milk to the projected creamery, was security on which any bank would lend money. The Danish butter trade, in the home market and then abroad, was built on mutual trust and on quality, which in turn mean efficiency of production pushed back from the creamery to the cowshed and the cowshed to the cow, her diet and her ancestors. The same is true of Danish bacon. A wholly artificial type of pig was created to suit not the Danish, but the English palate, a race as uniform as mass-produced cars on a conveyor-belt, and no less austere streamlined.

Danish farming was not always so intensive, so specialized, or so closely adapted to its market. Corn and fat cattle were the basis of Danish farming in the mid-19th century. The inflow of prairie wheat knocked the bottom out of such an economy. The changeover to arable dairying, pigs and poultry was no blind response to pressure. It was carefully thought out and executed through cooperative processing, marketing and purchasing of farm supplies. But the Danish farmer has come once again to a critical decision. Even before the war the English market, his mainstay, was not quite what it had been. Unemployment and the Ottawa Agreement had reduced his sales. The war isolated him for six years with no market but Germany. Worse, the blockade cut off those supplies of cheap imported feeding-stuffs which had nourished Danish pigs and made possible the high milk yields of Danish cows. Pig numbers were drastically reduced. The number of cows remained fairly constant, but their yield fell, to the advantage, possibly, of the stamina of the cow, but to the great disadvantage of the economy of the farm.

Now the Danes have emerged into the free world, from an occupation always borne with dignity and often resisted with great courage. Markets are open and hungry for the good things they can provide. But they themselves have become high-cost producers, no longer able to compete in their chosen line with producers in the New World. The high Danish standard of living, the cost of industrial goods in a country with high wages and no raw materials, the limited land

surface of the country, the impossibility of importing feeding-stuffs in any quantity, at a reasonable price, all combine against the farmer. What is he to do? Mechanization would cut costs somewhat, and the Danish farm, for all its efficiency, is not highly mechanized. But farms are small. Can cooperation bring small implements within his means or make large implements cooperatively available? But the question is bigger than this. Will the free world market in raw materials and food return? Can the Danish farmer once more freely buy his maize and cotton cake in the New World and freely sell his eggs and bacon and butter for the English breakfast table? As a writer in the *Berlingske Tidende*, one of Denmark's leading newspapers, put it:

Before the war, Denmark sent Britain butter and bacon as a matter of course, just as Britain sent Denmark coal and coke. In 1938 we sold to the British market about 120,000 tons of butter and got from Britain nearly 4,000,000 tons of coal and coke. In the first five months of this year we saved up 17,000 tons of butter for export to Britain. But we have had no coal and no coke in return.

This is a disastrous blow to our economy. In order to keep our productive machine working at all we have to fetch coal from across the Atlantic. . . .

Before the war, it cost us roughly 22 pounds of butter to buy a ton of British coal. Today we must ship over 50 pounds of butter to Britain to enable us to buy one ton of coal from the United States. It is a difference that is felt.

The crucial importance of British coal-mining, for others as well as ourselves, could not be more clearly put. The Danish farmer, in common with others, may wonder whether we shall turn our corner. Even when we have, he has still problems of cost and price relationships to solve. Is it only a case of holding on till things right themselves, or must he tear up a long lifetime of carefully planned economy by the roots and start afresh with some kind of Danish autarky, an autarky of less than 4,000,000 people with no industrial raw materials?

Whatever the answer, the Danish farmer will reach it slowly, perhaps, but soundly, by the processes of reason and democratic discussion, not least through his highly articulated cooperative movement. And whatever the future type of agriculture in Denmark, the Danish farmer will have inherited the enviable foundation of soil plants and livestock brought to a high pitch of productivity by the patient intelligence of the generations which have preceded him.